

High strength underwater flexible epoxy concrete and mortar

Uses

For the fast and permanent reinstatement of concrete, particularly where high strength, abrasion, impact and chemical resistance are required. The product is designed for underwater applications. It is ideally suited for reinstatement of defective concrete surface in bridges, dams, foundations, slabs, joints in highways, concrete runways and for use as a bedding material.

Advantages

- Most suited for underwater applications
- Solvent free
- Dimensionally stable hardening
- High compressive and abrasion strengths
- Curing unaffected by humidity
- Suitable for both damp and dry surfaces
- Rapid hardening at low temperatures
- Impact resistant

Description

Expocrete EUW is a solvent free, epoxy based underwater repair concrete, which is supplied as two component system. The required filler or aggregate size has to be selected as per the customer requirement.

Technical support

The company provides a technical advisory service supported by a team of specialists in the field.

Mix proportions

	Form
Base (B)	: Liquid
Hardener (H)	: Liquid
Filler (F)	: Graded sand as per customer requirement
Mixing ratio (by wt) :	B : H : F 2kg : 1kg : 18kg

Properties

Fresh Density of epoxy concrete / mortar	: 2.00 ± 0.20 kg/litre
Pot life	: 30 - 40min. at 27°C
@ 27°C	Air curing @ 7 days Underwater application @ 7 days
Compressive Strength (BS 6319 Pt.2)	>60 N/mm ² >40 N/mm ²
Bond strength to concrete (ASTM D4541)	>2 N/mm ² or substrate failure

Aggregate size *

2mm to 3mm	35%
500 micron to 1 mm	26%
75 micron to 500 micron	39%

* The mixed consistency varies as per the size of the aggregate chosen.

Application instructions

Preparation

The surface shall be cleaned free from any dust, unsound material, plaster, oil, paint, grease, corrosion deposits or algae. The surface shall be roughened and any laitance shall be removed by light scrubbing or grit blasting.

Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser.

Substrate priming

Normal concrete and other similar substrates do not require priming. Priming is not required even for underwater conditions. Expocrete EUW can be applied after thorough surface preparation. However, porous substrates has to be primed.

The primer consists of Expocrete EUW hardener and base mixed in the proportion 1:2 by weight. Expocrete EUW can be applied when the surface is tacky, typically 15 to 20 minutes after priming.

Mixing

Care should be taken to ensure that Expocrete EUW is thoroughly mixed to produce a fully homogenous, flowable concrete or mortar.

The 'hardener' and 'base' components should be stirred thoroughly in order to disperse any settlement before mixing them together. The entire contents of the base and hardener are emptied into a suitable container and mixed for about 3 minutes using a forced action mixer / slow speed heavy duty drill fitted with a paddle. Aggregate or filler selected by customer as per requirement shall be added slowly during mixing and mixed until homogeneous material is obtained.

Application

The mixed material shall be applied and then trowelled firmly into place as per required thickness. On primed surfaces, whilst the primer is still tacky, apply the mixed material. In underwater application, place the material ensuring minimum wash out. Form work to be used for vertical application.

Expocrete EUW (Dam repair)

Finishing

Expocrete EUW is levelled and finished with a steel trowel. The completed surface should not be overworked.

Cleaning

All tools and equipment shall be cleaned immediately after use with Nitoflor Sol, solvent.

Estimating

Packaging & Coverage

Expocrete EUW (5.55kg, Base & Hardener) packing
Nitoflor Sol 5 L

Storage

Shelf life

All products have a shelf life of 12 months below 35°C if kept in a dry store in the original, unopened packs.

Storage conditions

Store in dry conditions in the original, unopened bags or packs. If stored at high temperatures, the shelf life may be reduced.

Precautions

Health and Safety instructions

Expocrete EUW and Nitoflor Sol should not come in contact with skin or eyes, or be swallowed. Adequate ventilation shall

be ensured and inhalation of vapours shall be avoided. Some people are sensitive to resins, hardeners and solvents. Suitable protective clothing, gloves and eye protection shall be worn. If working in confined areas, suitable respiratory protective equipment must be used. The use of barrier creams provide additional skin protection.

In case of contact with skin, it shall be removed immediately with resin removing cream followed by washing with soap and water. Solvent should not be used. In case of contact with eyes, it shall be rinsed immediately with plenty of clean water and medical advice shall be sought immediately. If swallowed, medical attention shall be sought immediately - Vomiting should not be induced.

Fire

Expocrete EUW is non-flammable. Nitoflor Sol is flammable. It shall be kept away from sources of ignition. Smoking is prohibited during handling / application of the product. In the event of fire, it shall be extinguished with fire extinguishers like carbon-dioxide or foam. Use of water jet is not suggested.

Important note :

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.



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